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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,990	12/28/2000	Jorn Borch Soe	674509-2028	9458

20999 7590 05/06/2003
FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER

HENDRICKS, KEITH D

ART UNIT	PAPER NUMBER
1761	16

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/750,990	SOE, JORN BORCH
	Examiner	Art Unit
	Keith Hendricks	1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 January 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 44-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 44-69 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 15.
- 4) Interview Summary (PTO-413) Paper No(s) _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 22, 2003 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 44-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Within the context of the instantly-claimed methods, the phrase "consisting essentially of the steps", is indefinite. This phrase does not provide a clear denotation of the metes and bounds of the claimed invention, such that one skilled in the art would know which steps were included, and excluded, by the instant claims. Applicant's footnote at page 14 of the response of January 22, 2003 states that this phrase "allows for elements not explicitly recited, but exclude[s] elements that are found in the prior art or that affect a basic or novel characteristic of the invention." Applicant's statement is agreed with, in part, in the fact that this phrase does allow for elements not explicitly recited and excludes certain other elements that would affect the basic properties of the invention. However, the instant claims are drawn to a method, and thus it is unclear as to what steps are, or are not, included by the current language.

Applicant's specification does not provide guidance as to what additional steps might materially affect the invention, and thus would be excluded from the claim. Simply put, either the claims "comprise" a given set of steps, while also including other steps not specifically recited, or the claims "consist of" a given set of steps, excluding all others. Neither the claims nor specification support applicant's use of the phrase "consisting essentially of the steps".

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It remains unclear for what *function* the “second functional ingredient” is used. Applicant's arguments filed January 22, 2003 have been fully considered but they are not persuasive. At page 8 of the response, applicants recite several possible compounds that may constitute the second functional ingredient. Applicants state that “this is a function of the specific recitation of [sic] the second constituent.”

This is not deemed persuasive for the reasons of record. It is agreed that the specific *type* of second ingredient is a “function of the specific recitation of the second constituent”, meaning that the enzymatic reaction will result in the emulsifier compound and a specific second ingredient. However, this still does not provide the *function* of any specific compound. Further, not all of the claims provide a “specific recitation of the second constituent” (see claim 44). Still further, the function of the second ingredient is dependent upon several factors, including the starting substrate (i.e. the fatty acid ester and the second constituent), the esterase enzyme utilized (several hundred are encompassed by the instant claims), and the properties of the food material itself. Applicant's independent claims are of such breadth that none of these factors are specifically provided. Thus and again, it is unclear if the “second functional ingredient” is a by-product of the reaction, for example, water, and/or if this is a compound which is material to the foodstuff. Broadly-recited exemplary preferences of types of “functional ingredients” do not serve to clarify the issue, nor do they serve to provide an understanding of the fundamental properties of a “functional ingredient.”

In the case that such is not an essential part of the claims, it is recommended that the term “functional” be deleted from the rejected phrase.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 44-53 and 60-69 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Den Ouweland et al. (US PAT 5,695,802, of record). The reference is taken as cited in a previous Office action.

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Applicant's arguments filed January 22, 2003 have been fully considered but they are not persuasive.

At pages 12-13, applicant states that the claims require that the method takes place within the foodstuff, "and is not a method for preparing a composition to be added to food." At page 13, applicant states that Van Den Ouwehand et al. is not applicable because it is "directed to the preparation of an ingredient to be added to food, i.e. a 'flavoring composition', comprising the diglyceride fraction of a hydrolysate of vegetable or animal fat. Applicant states that "neither the hydrolysate nor the diglyceride fraction therefrom is a 'foodstuff'.

This is not deemed persuasive for the reasons of record. Applicants are referred to their own claims 60, 65, and 67-68. These claims specifically recite that "the foodstuff is selected from" such items as "edible oils and fats" (claim 60), "coffee cream" (claim 65), "water in oil emulsions, oil in water emulsions, margarine or shortening" (claim 67), and "sauces and mayonnaise" (claim 68). Each of these would be "an ingredient to be added to food", which applicant proceeded to argue should not be encompassed by the instant claims. Moreover, "edible oils and fats", and "shortening", for example, would hardly be considered "foodstuffs" in and of themselves, without subsequently being added to a larger food composition. Applicant's comments are not well taken.

Applicant's comment that there is no teaching of inactivating the enzyme, is not deemed persuasive for the reasons of record. Applicant is referred to page 7 of the first Office action (paper # 6), where it is clearly stated that the butter was "heated for 15 minutes at 90°C to stop the hydrolysis."

Applicant's comment that the reference "does not disclose or suggest the presence of the second constituent in the food material as in the instant claims, nor the generation of the second functional ingredient from the second constituent." This is not deemed persuasive for the reasons of record.

Applicant's response flies in the face of accepted food science and chemistry, and contradicts their own claims (see above). The foodstuffs disclosed in the reference are not elements on a periodic table, consisting of a single, pure component. They contain many different compounds, and said foodstuffs are also encompassed and/or specifically-disclosed by applicant's own claims. Finally, the reference need not recite the specific elements of a natural enzymatic reaction, so long as the required elements are present, and the method steps have been met. As this is the case, applicant's claims are anticipated. It is noted that reference to a basic biochemistry textbook sheds light on the fact that the reaction of any esterase requires the presence of a "constituent comprising a hydroxy group", i.e. water. Further, as the activity of an esterase works upon multiple substrates at the same time (i.e. water and another compound, for example), it also inherently produces two different compounds as the end products. Applicant's

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claims simply describe this natural process. Thus, as previously stated on the record, absent any clear and convincing evidence and/or arguments to the contrary, as the method steps are the same as those instantly claimed, and as the claim limitations encompass the teachings of the reference, it would be expected that the same enzymatic reaction(s) would yield "an emulsifier" compound, as well as a by-product secondary compound(s).

Claims 44-61 and 69 are rejected under 35 U.S.C. 102(b) as being anticipated by Olesen et al. (WO 94/040035, of record).

Olesen et al. disclose the addition of a lipase to dough products to be baked. The lipase may originate from various microbial sources, including Rhizomucor (Mucor), Candida and Aspergillus species. The lipase is added and maintained such that it is not inactivated until the dough is baked, thus allowing the enzyme to provide the desired effect. At pages 6 and 10, for example, it is clearly stated that the "lipase forms an 'in situ' emulsifier comprising mono- and diglycerides in dough. The dough or dough improver ingredients may comprise added fat (pg. 14), and also comprise further components, including sugars, sugar alcohols, other polyols, lactic acid or other organic acids (each may be added with the enzyme preparation, as stated at pg. 10), ascorbic acid, milk powder, salt and amino acids (pg. 11). Further, the dough components such as wheat flour/starch naturally contain several of these components, which applicants refer to as "second constituent", including proteins, amino acids, sugars, dextrins, etc., as well as the first component of a fatty acid ester.

Thus, the claimed invention is anticipated by the reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Hendricks whose telephone number is (703) 308-2959. The examiner can normally be reached on M-F (8:30am-6pm); First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (703) 308-3959. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3602 for regular communications and (703) 872-9565 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



KEITH HENDRICKS
PRIMARY EXAMINER